

PATENT ABSTRACTS OF JAPAN

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(54) ROOM TEMPERATURE-SETTING COMPOSITION

(57)Abstract:

PROBLEM TO BE SOLVED: To obtain a room temperature-setting composition which contains an organic polymer having at least one reactive silicon-containing group as the main component and has a sufficient adhesiveness even to the steel plate coated with an acrylic resin or with a fluororesin by an electrophoretic deposition process, or to the cured product of a sealant such as a silicone sealant.

SOLUTION: This room temperature-setting composition comprises (A) 100 pts. mass of an organic polymer which has at least one silicon-containing group, has a hydroxyl group or a hydrolyzable group bonding to the silicon, and can crosslink by forming a siloxane bond, (B) 1-50 pts. mass of an epoxy resin, (C) 0.1-30 pts. mass of an oxazolidine compound, (D) a silanol condensation catalyst, and (E) an amine promoter.

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2. sss shows the word which can not be translated.

3. In the drawings, any words are not translated.

CLAIMS

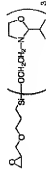
[Claim(a)]

[Claim 1] (A) Organic polymer 100 mass part which has a hydroxyl group or a hydrolytic basis combined with a silicon atom, and has at least one silicon content group which can construct a bridge by forming a siloxane bond, (B) A room-temperature-curing nature constituent containing one to epoxy resin 50 mass part, the (C) oxazolidone compound (1) - 30 mass part, the (D) silanol condensation catalyst, and (E) amine compound or catalyst (1) 2-20 mass part, (2) The room-temperature-curing nature constituent containing at least one of (1) and (2) as a curing accelerator, and (3) a mixture of ORUTOGI acid ester and (3) ORUTOGI acid ester, and a p-toluenesulfonic-acid monoisocyanate according to claim 1.

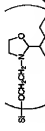
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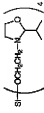
オキザゾリジンシリルエーテル化合物 (1)



オキサゾリジンシリルエーテル化合物 (2)



オキザゾリジンシリルエーテル化合物 (3)



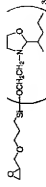
オキサゾリジンシリルエーテル化合物 (4)

[0076]

[Formula 18]



オキサンゾリジンシリルエーテル化合物 (5)



オキザゾリジンシリルエーテル化合物 (B)



オキサンゾリジンシリルエーテル化合物 (7)

[0077]The oxazolidine compound furthermore suitably used as an ingredient (C) of this invention is a compound shown with the following formula 9.



[0078] R^{24} is an aliphatic hydrocarbon group which has with a carbon numbers of one or more straight chain shape or branched chain, for example, shows an alkyl group, an alkenyl group, and an alkylene group here. R^{25} and R^{26} show the hydrocarbon group of a hydrogen atom or the carbon numbers 1–20 independently respectively. These desirable examples are shown below.

[0079]

[Formula 20]

placed about 1 cm in diameter in the shape of a bead, and cure of health 50 °± 20 ° for three days and for three days was performed. Then, it is based on the simple adhesive property examination (Japanese material industrial meeting structural sealing material handbook p.103) by info cutting, and is friction test ***** (a 0-degree friction test and a 90-degree friction test about a 0 degree direction and a 90-degree direction as a tensile direction. The adhesive property was evaluated like Oxazolidine destruction, **thin layer exfoliation, and interface exfoliation.

[0107]A result is shown in the 3rd table. The room-temperature-curing nature constituent (working example 1 and 2) of this invention reveals the outstanding adhesive property as a which, adhering to glass, an acrylic deacrylating resin, etc., and the oxazolidine compound, which adheres to each hardened material, is clearly seen in the 3rd table. When using the primer (primer B) inferior with exfoliation nature, the outstanding adhesive property can be made to reveal by adding (F) oxazolidine ring breakage accelerator further, or choosing the suitable (C) oxazolidine compound. On the other hand, the conventional room-temperature-curing nature constituent (comparative example 1) which contains (A) organically polymer and the (B) epoxy resin, and does not contain the (C) oxazolidine compound does not reveal sufficient adhesive property.

[0108]

[Table 3]

第 3 表

室温硬化性組成物	比較例						
	1	2	3	4	5	6	7
プライマー組成物	A	A	B	B	B	B	B
はく離試験 (90°はく離/0°はく離)							
アルミニウム板	O/x	O/O	O/x	O/Δ	O/Δ	O/O	O/O
ガラス板	O/x	O/Δ	O/O	O/x	O/Δ	O/O	O/O
アクリル系接着剤	Δ/x	O/Δ	O/O	Δ/x	Δ/Δ	O/Δ	O/O
フタ素体付板	Δ/x	O/Δ	O/O	Δ/x	Δ/x	O/O	O/O
シリコーン系シーラント硬化剤	—	—	x/x	Δ/x	Δ/x	Δ/Δ	Δ/O

[0109]

[Effect of the Invention]The room-temperature-curing nature constituent of this invention reveals sufficient adhesive property also to the hardened material of sealant, such as a difficulty adhesive property steel plate in which acrylic electropainting, fluoride paint, etc. were performed, and silicone series sealant.

[Translation done.]